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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/762,519 | 02/07/2001 | Toshikazu Tomioka | 10059-372US | 4800 |

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AKIN GUMP STRAUSS HAUER & FELD L.L.P.
ONE COMMERCE SQUARE
2005 MARKET STREET, SUITE 2200
PHILADELPHIA, PA 19103-7013

EXAMINER

MUTSCHLER, BRIAN L

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| ART UNIT | PAPER NUMBER |
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1753

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,519

Applicant(s)

TOMIOKA ET AL.

Examiner

Brian L. Mutschler

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10, 15 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 15 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 27, 2004, has been entered.

Comments

2. Applicant's cancellation of claims 9, 11, 13, 16, and 17 in the response submitted October 27, 2004, is acknowledged.
3. The objection to the table in the specification has been overcome by Applicant's amendment to the specification.
4. The rejection of claims 11, 13, 16, and 17 under 35 U.S.C. 112, second paragraph, has been overcome by Applicant's cancellation of the claims.
5. The rejection of claims 9, 10, and 15 under 35 U.S.C. 102(b) over Anderson has been overcome by Applicant's amendment. Anderson does not teach or disclose the use of an electrode having a porous structure, a mesh structure, or a brush structure as recited in the amended claims.

Claim Objections

6. Claim 15 objected to because of the following informalities:
- a. In claim 15 at lines 11-12, please delete the repetitive "wherein."
 - b. In claim 15 at line 18, please insert a comma after "space."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 10 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "the one electrode having the structure" in line 18. This limitation is indefinite because the limitation does not clearly identify the electrode that is addressed. Two of the at least two electrodes have been identified as an electrode having a structure. The same applies to dependent claim 10.

Claim 15 recites the limitation "provided that the one electrode having the structure does not have the lower oxidation/reduction potential relative to the remaining at least two electrodes" in lines 18-20. This limitation is indefinite because it requires the presence of three electrodes. Therefore, either this limitation is incorrect, or the prior limitations reciting "at least two electrodes" are misleading. The same applies to dependent claim 10.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 10, 15, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Muroki (U.S. Pat. No. 5,944,685).

Regarding claims 15 and 18, Muroki teaches an electrochemical device for moving charged particles by electrophoresis comprising two electrodes (2 (copper), 4 (zinc)) having different oxidation/reduction potentials and a circuit (conductive sheets) (5, 5') that short-circuit the electrodes (figs. 1A and 1B; abstract; col. 5, line 7 to col. 6, line 53). The particles would move in a direction aligned perpendicular to the surface of the electrodes (2, 4). One electrode (4) has a grid structure and the other electrode (2) can be a meshed metal film or a metal film with perforated patterns (figs. 1A and 1B; col. 5, lines 7-35). Therefore, both electrodes (2, 4) in the device of Muroki are capable of permitting fluid to flow through. The device has a non-conductive pad layer (42) disposed between the electrodes (2, 4) (fig. 1B; col. 5, lines 7-41). The non-conductive pad (42) has a grid structure that would allow liquid to pass through (fig. 1B).

Depending on the charge of the analyte, the analyte would move from the electrode

having the higher oxidation/reduction potential to the electrode having the lower oxidation/reduction potential. Muroki discloses the use of a gel (3) between the electrodes (2, 4) (col. 21-23). By definition, a gel is a colloidal substance that is part solid and part liquid.

Regarding claim 10, both electrodes (2, 4) in the device of Muroki are capable of permitting fluid to flow through. One electrode (4) has a grid structure and the other electrode (2) can be a meshed metal film or a metal film with perforated patterns (figs. 1A and 1B; col. 5, lines 7-35). Therefore, the device has introduction/discharge portions at either side.

Since the device of Muroki is designed for moving particles electrophoretically, it would be capable of moving particles covered with protein, which contain charged groups.

Since Muroki teaches all of the structural limitations recited in the claims, the reference is deemed to be anticipatory. Regarding the limitation reciting that the device gives a liquid having a condensed concentration of the microorganisms and/or blood cell components, the limitation is an intended use of the device and only limits the device insofar as requiring the prior art to teach a device capable of performing the intended use. Since the device of Muroki is capable of electrophoretically moving charged particles, the reference is deemed to be capable of performing the intended use.

Response to Arguments

11. Applicant's arguments filed October 27, 2004, have been fully considered but they are not persuasive.

12. Applicant argues that Muroki does not possess each element of the invention as claimed because Muroki does not disclose a liquid containing particles covered with a protein (see page 7 of Applicant's response). This argument is not persuasive because the liquid containing particles covered with a protein does not structurally limit the claimed device. The liquid is not a part of the device. The liquid is the intended use of the device. The structure of the device does not change when different liquids are used. The device of Muroki is used to move drugs (antibiotic drugs, anti-epilepsy drugs, anti-arrhythmia drugs, hormone drugs, and insulin drugs) through the conductive matrix 3, which is made of a gel (see col. 10, lines 15-20). Gels are colloidal substances (i.e., part solid and part liquid) that allow the transport of charged particles. Since Muroki teaches all of the structural limitations recited in the claims and is capable of performing the intended use, the reference is deemed to be anticipatory.

13. Applicant further argues that Muroki does not teach electrodes having a porous structure, a mesh structure, or a brush structure (see page 7 of Applicant's response). This argument is not persuasive because both electrodes in the device of Muroki satisfy this limitation. One electrode (4) has a grid structure and the other electrode (2) can be a meshed metal film or a metal film with perforated patterns (figs. 1A and 1B; col. 5, lines 7-35). Therefore, Applicant's argument is not persuasive.

Conclusion

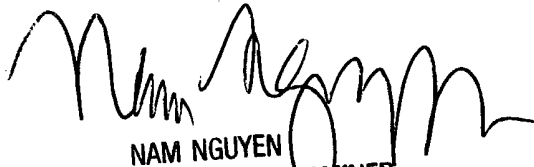
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian L. Mutschler whose telephone number is (571) 272-1341. The examiner can normally be reached on Monday-Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BLM
November 10, 2004



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SUPERVISORY PATENT EXAMINER
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